



PATENT

UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 00-1123-R)

In the Application of:

Lin, et al.

Serial No.: 10/667,696

) Art Unit: 1641

Filed: September 22, 2003

) Examiner: TBA

For: Label-Free Methods for Performing Assays Using
a Colorimetric Resonant Optical Biosensor

TRANSMITTAL LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In regard to the above identified application,

1. We are transmitting herewith the attached:
 - a) Second Supplemental Information Disclosure Statement PTO Form 1449;
 - b) Three (3) cited references;
 - c) Statement of Applicants;
 - d) Return postcard
2. With respect to fees:
 - a) It is believed no fee is due at this time.
 - b) Please charge any underpayment or credit any overpayment our Deposit Account, No. 13-2490.
3. GENERAL AUTHORIZATION: Please charge any additional fees or credit overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.
4. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 10, 2004.

Respectfully submitted,

Lisa M.W. Hillman

Registration No. 43,673

Date: June 10, 2004



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(Case No. 00-1123-R)

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Lin, et al.) Art Unit: 1641
Serial No.: 10/667,696)
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For: Label-Free Methods for Performing)
Assays Using a Colorimetric Resonant)
Optical Biosensor)

STATEMENT OF APPLICANTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the duty of disclosure provided by 35 C.F.R. § 1.56 and §§ 1.97-98, the applicants wish to make the following statement of record in the above-identified application.

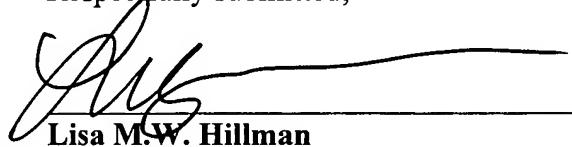
Applicants wish to clarify the specification. The specification states that:

When the effective index of refraction of the grating region is greater than the substrate or the cover layer, a waveguide is created. When a filter is designed properly, incident light passes into the waveguide region and propagates as a leaky mode. A grating structure selectively couples light at a narrow band of wavelengths into the waveguide. The light propagates only a very short distance (on the order of 10-100 micrometers), undergoes scattering, and couples with the forward- and backward-propagating zeroth-order light. This highly sensitive coupling condition can produce a resonant grating effect on the reflected radiation spectrum, resulting in a narrow band of reflected or transmitted wavelengths. See page 21, line 14 through page 22, line 1. .

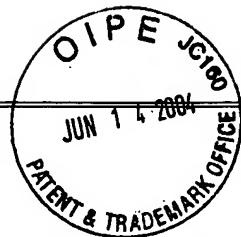
However, Applicants have recently used techniques that provide for better resolution than were available to the Applicants at the time the application was filed and have determined that the biosensor structure is not accurately characterized as a waveguide because propagation of guided modes in the lateral direction are not supported. Rather, the guided mode resonant effect has been demonstrated to occur over a highly localized region of approximately 3 microns from the point that any photon enters the structure instead of the original determination of 10-100 micrometers.

Respectfully submitted,

Date: 01/10/04

By: 

Lisa M.W. Hillman
Reg. No. 43,673

FORM PTO-1449
(Rev. 2-32)U.S. Department of Commerce
Patent and Trademark Office

Atty. Docket No.

00-1123-R

Serial No.

10/667,696

**SECOND SUPPLEMENTAL INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use several sheets if necessary)

Applicant:

Lin, et al.

Filing Date:

September 22, 2003

Group:

1641

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

		1. Bertoni, et al., "Frequency-Selective Reflection and Transmission by a Periodic Dielectric Layer", <i>IEEE Transactions on Antennas and Propagation</i> , Vol. 37, No. 1, pp. 78-83 (1989)
		2. Brundrett, et al., "Normal-incidence guided-mode resonant grating filters: design and experimental demonstration", <i>Optics Letters</i> , Vol. 23, No. 9, pp. 700-702 (1998)
		3. Peng, "Polarization-control Components and Narrow-band Filters Based on Subwavelength Grating Structures" 1996
		4. Statement of Applicants dated June 10, 2004
EXAMINER		DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.